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Amendment

matter of claim 49. Claims 41, 45 and 49 have been canceled, and independent claim 24 has been canceled.

Claim 41 is rejected as defining obvious subject matter over the Freeman reference, in light of the Kalmar reference and the Backteman reference. Claims 45 and 49 are rejected as defining obvious subject matter over the Freeman reference in light of the Kalmar reference. Thus, to the extent that the rejections of claims 41, 45 and 49 would be carried over to amended claims 16, 22 and 25, such rejections are respectfully traversed for the reasons discussed below.

For discussion purposes, the rejection of claim 49 (claim 25) is first addressed. In the rejection of claim 49 (paragraph 4), the Office action admits that the Freeman reference does not disclose: 1) using a container having a set of outer walls defining an inner volume; 2) loading freight in the container; and 3) a vehicle including a gripper including a spreader, the gripper being capable of being raised and lowered, rotated and inclined relative to the body of the vehicle.

The Office action then takes the position that the Kalmar reference discloses the steps/structure not shown in the Freeman reference, and submits that it would have been obvious to one of ordinary skill in the art to modify the method of the Freeman reference by the reach stacker and containers of the Kalmar reference to arrive at the claimed invention. The proposed motivation for the combination is that the combination would protect the shipped product from moisture.

However, it is submitted that the proposed modification, even if made would not result in the claimed invention. It is also submitted that one of ordinary skill in the art would not be motivated to combine the Freeman and Kalmar references in the proposed manner because the resultant system would be inoperable, and because the Office action does not provide a proper motivation for the proposed combination. In particular, a system of the proposed combination would be inoperable because the structure of the Freeman reference would not be able to accommodate the reach stacker of the Kalmar reference.

It is noted that the Office action relies upon the ramp in Fig. 3 of the Freeman reference, for example, in the rejection of claim 22. As can be seen in the Fig. 1 of the Freeman reference,

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the ramp 24 has a width only slightly wider than the forklift 30. Further, the relative sizes between the dimensions of an operator and a forklift 30 can be seen in Fig. 3.

Thus, through comparison of Figs. 1 and 3, it can be surmised that a ramp of the Freeman reference has a width of about the height of an average adult; i.e. about 6 feet. However, as noted at page 3 of the Kalmar reference, the reach stacker of that reference has a width either about 12 feet or about 13.6 feet (3650 mm and 4150 mm, respectively). Thus, if the reach stacker of the Kalmar reference were attempted to be used in the system of the Freeman reference, the subject matter of the claims would not be shown because the reach stacker would not be able to be driven onto the barge.

Further, each of claims 16, 22 and 25 specify that the ramp has sufficient strength to support the vehicle when the vehicle is transporting a fully loaded container. In contrast, it is submitted that the ramp of the Freeman reference would not be able to support a fully loaded container of the Kalmar reference. As an initial matter, it is noted that the reach stackers of the Kalmar reference weigh 36,400 kg., 40,000 kg. and 37,300 kg. respectively (see page 3 of the Kalmar reference). The Kalmar reference also specifies that the lifting capacity of the reach stackers are up to 8 and 10 tonnes, which is indicative of the extremely high weight which the reach stackers can carry. Furthermore, as shown in the photographs of the Kalmar reference, the containers of the Kalmar reference are significantly greater in size than the pallets of the Freeman reference.

In Applicants' previous Amendment, Applicant pointed out that the container of the proposed combination could hold between about 16-37 times the volume of the sugar of the pallets of the Freeman reference, and pointed out that the ramp of the Freeman reference could not support such weight. This calculation was made assuming the type of container of the 20'x8' x8' or 40'x8'x8½' size.

The Office action discounts Applicants' argument in this regard by noting that ISO containers come in various sizes, and indicating that Applicants' arguments do not appear to be based on the references presented in the rejection. However, because the Office action now relies upon the Kalmar reference, the containers specified therein can be seen in the photographs

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of that reference to be the 20'x8'x8' or the 40'x8'x8½' types of containers assumed in Applicants' previous Amendment. Thus it can be seen that the containers of the Kalmar reference are much larger, bulkier, and heavier than the pallets of the Freeman reference and would weigh up to 16-37 more than the pallets of the Freeman reference. Accordingly, due to the additional weight of the reach stacker of the Kalmar reference, as well as the additional weight of the loaded containers carried by the reach stacker, the ramp of the Freeman reference would be unable to support the weight of a loaded reach stacker of the Kalmar reference.¹

Thus, due to the more than double width size of the reach stacker of the Kalmar reference, the 8-10 tonne weight of the reach stackers of the Kalmar reference, as well as the use of container which can hold between 16-37 times the volume/weight of the pallets of the Freeman reference, it can be seen that the ramp of the Freeman reference would fail if attempted to support the reach stacker/containers of the Kalmar reference.

Furthermore, the deck of the barge of the Freeman reference cannot support the loaded reach stacker of the Kalmar reference. Instead, the deck of the barge must be reinforced to support the immense weight of a loaded reach stacker. For example, as disclosed at page 5, lines 17-20 of the originally-filed application, a barge used with the system of the present invention may require the deck to be reinforced. Because there is not evidence that the deck of the barge of the Freeman reference is reinforced, it is submitted that the deck would not be able to support a loaded reach stacker of the Kalmar reference.

In particular, in marine vessels it is, of course, desired to maintain as little weight as required to keep fuel and shipping costs to a minimum. Accordingly, it is submitted that the deck of the barge of the Freeman reference may be strong enough to support a fork lift/pallet of that reference, but would not be sufficiently be reinforced to support a loaded reach stacker of the Kalmar reference. Thus, if the reach stacker of the Kalmar reference were attempted to be

¹ As pointed out in Applicants' previous Amendment (and not disagreed-with in the Office action), it is normal and standard engineering design to select equipment that is sufficient to carry out the expected operations (with the inclusion of a safety factor). Therefore the ramps of the Freeman reference would be sufficient to accommodate the forklifts loaded with pallets, but would fail if required to support 16-37 or more times the weight expected during normal operations.

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driven on the deck of the Freeman reference, the deck would deform and/or fail under the weight under the reach stacker. Each of independent claims 16, 22 and 25 specify that the storage deck has sufficient strength to support the vehicle when the vehicle is transporting a fully loaded one of the containers.

It is noted that in the rejection of claims 47 and 48 (paragraph 11) the Office action indicates that:

Freeman also shows using a ramp to move a forklift to and from a ship. It inherently discloses that the deck is strong enough to support the vehicle since the method would not be functional otherwise.

However, Applicant does not necessarily disagree that the deck of the Freeman reference is strong enough to accommodate the fork lifts and loads disclosed therein. It is only when the deck of the Freeman reference is used to support a significantly larger and heavier vehicle (in fact, a vehicle of a wholly different class than a forklift), and when such vehicle carrying significantly heavier loads (i.e. fully loaded container as opposed to pallets) wherein it is submitted that the ramp would fail, or would be unusable.

Furthermore, in order to support a reach stacker located thereon, the barge must be arranged to have sufficient stability. In particular, due to the large weight of a loaded reach stacker, when the reach stacker is located adjacent to an outer edge of the barge, the weight of the loaded reach stacker may cause the barge to tilt towards the reach stacker in an unsafe manner. As noted at page 3, lines 20-22 of the application, the beam-to-length ratio of the barge of the present invention is selected to provide sufficient stability for the reach stacker to transport containers on the deck of the barge. Page 5, lines 14-19 of the application disclose that the barge may have a beam B which is approximately one quarter the length L of the barge, to provide a ratio which is approximately two times that of a typical ocean-going vessel.

In fact, these very issue involving the ramp, the deck, and the configuration of the barge highlight the novelty and patentability of the present invention. Prior to this invention, cranes (either located on a ship or located on shore) were used to load and unload containers onto the vessels. These cranes either stayed on shore or traveled with the ship. Reach stackers were

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"land based" vehicles which shuttled the containers to other vehicles (i.e. rail cars, tractor-trailers, etc.) or to locations where the containers could be lifted and transported by cranes. Such an arrangement can be seen in the photographs of the Kalmar reference. For example, large lifting cranes can be seen in the background of the photographs on pages 5, 8, 10 and 11.

Particularly instructive is the photograph in pages 8 and/or 12 of the Kalmar reference. These photograph appear to disclose a reach stacker loading or unloading a container onto a barge. Notable in this picture is the fact that the reach stacker is located on the loading wharf, and not on the barge, during the loading/unloading.

Although the invention may appear, on its face, to be a relatively simple invention from a technological stand point, it is submitted that Applicants have invented a method which is in fact novel and non-obvious, and, as noted above, resulted from creative and non-traditional thinking to cross the "invisible barrier" for reach stackers. Various considerations, including providing a wide, reinforced ramp, a reinforced deck, and a highly stable configuration to the barge had to be addressed by the Applicants. Thus, it is submitted that the invention is patentable over the Freeman and Kalmar references.

Of course, none of the pictures in the Kalmar reference disclose a reach stacker located on a barge, because prior to applicants' invention reach stackers were considered to be "land-based" vehicles. Applicants were able to see through this traditional thought process to arrive at the present invention, which involves driving reach stackers *on to the barge or vehicle*.

In making its rejection of claim 49, the Office action relies upon the Freeman and Kalmar references. However, it is submitted that after making the proposed combination, the only elements of the Freeman reference which are utilized in the rejection are: 1) a barge; and 2) a ramp extending from the barge to a wharf. The Office action then cites to the containers and reach stacker of the Kalmar reference, and concludes that one of ordinary skill in the art would use the container and reach stacker of the Kalmar reference with the barge of the Freeman reference, and drive loaded containers over the ramp.

The proposed motivation for the proposed modification is to "protect the shipped product from moisture." However, it is submitted that if one of ordinary skill in the art wished to protect

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the pallets of the Freeman reference from moisture, such worker would simply locate a tarp over the goods, or encase the goods in shrink wrap, etc. It is submitted that a worker would not carry out the modification proposed in the Office action, which involves 1) discarding the pallets of the Freeman reference; 2) discarding the forklift trucks; 3) bringing in large containers; and 4) bringing in reach stackers to handle such containers, all in the name of "protecting from moisture." Instead, there are much other easier, more logical steps a worker would take to protect the shipped goods from moisture.

It is submitted that these somewhat convoluted steps proposed in the Office Action used to "protect from moisture" may result from use of applicant's disclosure as a template to reconstruct applicant's invention. It is noted that the reach stackers of the Kalmar reference are all shown working adjacent to barges, and loading containers onto and from the barges. However, none of the photographs show the reach stackers driven onto a barge, and the Office has to date not produced any references that show a reach stacker being driven onto a vessel or barge for loading operations.

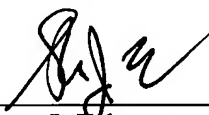
Thus, besides the fact that the Freeman and Kalmar references cannot be combined to arrive at the claimed invention, it is respectfully submitted that the Office action has not provided sufficient motivation for the proposed combination of the Freeman and Kalmar references.

It is further submitted that claims 41 and 45 define over the cited references for the same reasons as those discussed above, and it is requested that the rejection of the claims over the cited references be withdrawn. Thus, in sum, in view of the foregoing amendments and arguments, the application appears to be in a condition for allowance, and a formal notice thereof is requested.

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The Commissioner is hereby authorized to charge any additional fees which may be required by this paper, or to credit any overpayment to Deposit Account 20-0809. Applicant hereby authorizes the Commissioner under 37 C.F.R. §1.136(a)(3) to treat any paper that is filed in this application which requires an extension of time as incorporating a request for such an extension.

Respectfully submitted,



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MARKED-UP COPIES OF AMENDED CLAIMS

16. (Four Times Amended) A method of loading containers on a marine vessel comprising the steps of:

selecting a plurality of containers adapted to contain and protect freight in a marine environment, each container having a set of outer walls defining an inner volume;

loading freight into said inner volume;

providing a vehicle including a body portion and a gripping portion including a spreader attachment, said gripping portion being capable of being raised and lowered, rotated, and inclined relative to said body portion, said vehicle including wheels which are configured to roll on a support surface when said vehicle is moved;

individually lifting and transporting each container by means of said vehicle over a ramp to a storage deck of a marine vessel, said ramp and storage deck having sufficient strength to support said vehicle when said vehicle is transporting a fully loaded one of said containers;

positioning each container at desired locations on said deck by means of said vehicle for transportation by said marine vessel, wherein said wheels are in contact with said support surface during said lifting and positioning steps; and

securing said container to said deck at said locations.

22. (Four Times Amended) A method of offloading containers from a marine vessel comprising the steps of:

selecting a plurality of containers adapted to contain and protect freight in a marine environment located on a deck of a marine vessel, each container having a set of outer walls defining an inner volume and having freight loaded therein;

providing a vehicle including a body portion and a gripping portion including a spreader attachment, said gripping portion being capable of being raised and lowered, rotated, and inclined relative to said body portion, said vehicle including wheels which are configured to roll on a support surface when said vehicle is moved;

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individually lifting and transporting each container by means of said vehicle over a ramp from a storage deck of a marine vessel, said ramp and storage deck having sufficient strength to support said vehicle when said vehicle is transporting a fully loaded one of said containers;

placing each container at desired locations on an associated dock by said vehicle, wherein said wheels are in contact with said support surface during said lifting and placing steps.

25. (Six Times Amended) A method of transporting containers with a marine vessel comprising the steps of:

selecting a plurality of containers adapted to contain and protect freight in a marine environment, each container having a set of outer walls defining an inner volume and having freight loaded therein;

providing a vehicle including a body portion and a gripping portion including a spreader attachment, said gripping portion being capable of being raised and lowered, rotated, and inclined relative to said body portion, said vehicle including wheels which are configured to roll on a support surface when said vehicle is moved;

lifting a container by means of said vehicle;

causing said vehicle to travel over a ramp to or from a storage deck of a marine vessel, said ramp and storage deck having sufficient strength to support said vehicle when said vehicle is transporting a fully loaded one of said containers;

positioning said container at a desired location on a support surface or dock by means of said vehicle, wherein said wheels are in contact with said support surface during said lifting and positioning steps; and

repeating said lifting, causing and positioning steps for each of said plurality of containers.